CLAIMS:

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A resist composition comprising a polymer comprising recurring units of the following general formula (1) and having a weight average molecular weight of 1,000 to 500,000,

$$\begin{array}{c|c}
R^1 & R^2 \\
-(CH-C) & \\
O & R^4 \\
CH-CH & \\
O & R^5
\end{array}$$
(1)

wherein R^1 and R^2 are each independently hydrogen, hydroxy, a straight or branched alkyl group, halogen atom or trifluoromethyl group, R^3 is methyl or ethyl, R^4 and R^5 each are an alkyl group having 1 to 7 carbon atoms, or R^4 and R^5 may bond together to form a cyclic structure.

A resist composition comprising a polymer comprising recurring units of the following general formula (2) and having a weight average molecular weight of 1,000 to 500,000,

wherein R^2 is hydrogen, hydroxy, a straight or branched alkyl group, halogen atom or trifluoromethyl group.

3. A resist composition comprising a polymer comprising recurring units of the following general formula (1) and recurring units of the following general formula (3) and

having a weight average molecular weight of 1,000 to 500,000,

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wherein R¹ and R² are each independently hydrogen, hydroxy, a straight or branched alkyl group, halogen atom or trifluoromethyl group, R³ is methyl or ethyl, R⁴ and R⁵ each are an alkyl group having 1 to 7 carbon atoms, or R⁴ and R⁵ may bond together to form a cyclic structure, t is a positive number,

wherein R^6 , R^7 , R^9 , R^{10} and R^{11} are each independently hydrogen, hydroxy, a straight or branched alkyl group, halogen atom or trifluoromethyl group, R^6 is an alkyl group having 1 to 10 carbon atoms, R^{12} is an alkyl group having 4 to 30 carbon atoms or silicon-substituted alkyl group, q, r and s are 0 or positive numbers, and p is a positive number.

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4. A resist composition comprising a polymer comprising recurring units of the following general formula (2) and recurring units of the following general formula (3) and having a weight average molecular weight of 1,000 to 500,000,

$$\begin{array}{c}
R^{2} \\
-(CH_{2}-C)_{1} \\
O \\
O \\
CH_{3}
\end{array}$$

$$\begin{array}{c}
CH-CH \\
O \\
CH_{3}
\end{array}$$

$$\begin{array}{c}
CH_{3}
\end{array}$$

$$\begin{array}{c}
CH_{3}
\end{array}$$

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wherein R^2 is hydrogen, hydroxy, a straight or branched alkyl group, halogen atom or trifluoromethyl group, and t is a positive number,

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wherein R⁶, R⁷, R⁹, R¹⁰ and R¹¹ are each independently hydrogen, hydroxy, a straight or branched alkyl group, halogen atom or trifluoromethyl group, R⁸ is an alkyl group having 1 to 10 carbon atoms, R¹² is an alkyl group having 4 to 30 carbon atoms or silicon-substituted alkyl group, q, r and s are 0 or positive numbers, and p is a positive number.

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5. A chemically amplified positive resist composition comprising

- (A) an organic solvent,
- (B) the polymer of claim 1 as a base resin, and
- (C) a photoacid generator.

A chemically amplified positive resist composition comprising

- (A) an organic solvent,
- (B) the polymer of claim 1 as a base resin,
- (C) a photoacid generator, and
- (D) a dissolution inhibitor.

The chemically amplified positive resist composition claim 5, further comprising (E) a basic compound.

A process for forming a resist pattern comprising the steps of:

applying the resist composition of claim 1 onto a substrate to form a coating,

heat treating the coating and then exposing it to high-energy radiation or electron beam through a photo mask, and

optionally heat treating the exposed coating and developing it with a developer.

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